

Cryogenics

The primary hazards at the beamline are cryogenics. Liquid nitrogen is almost always present because it is necessary for the microscope detectors to function. Occasionally, liquid helium is also used to either cool samples or to fill detectors for the far-infrared.

When handling cryogenics, you must wear the proper personal protective equipment (PPE)!

General Cryogenic Guidelines

Task	Required PPE
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Working with pressurized systems (i.e.,	opening / closing valves, manipulating connections, verifying
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Face shield and safety glasses; gloves; long pants or apron
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General use of dewars and other unpressurized	systems.
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Safety glasses or goggles; gloves; long pants or apron

What hazards are at the beamline?

Handling, transporting closed containers

None

You should avoid working with cryogens above eye level whenever possible, but if not, goggles should be used instead of safety glasses.

Sample Hazards

The other hazards at the beamline are what users bring with them to measure. These hazards will be listed on the [ESS](#) and the [UEF](#), which is located on the Sector 1 bulletin board (located on the gray walkway that encircles the experimental floor, just before turning into the 1.4/12.3 area).

Chemicals

Standard Berkeley Lab policy when working with chemicals in a lab or shop environment prescribes safety glasses, lab coat, and gloves, in addition to the standard closed-toe shoes; see the [Chemical Hygiene and Safety Plan](#) for more information.

Generally, work with chemicals on the floor involves little risk (small quantities of relatively nonhazardous chemicals), so PPE requirements may be minimal. Examples are:

- Loading